Notes on soil sampling and analysis data in the developed portion of the site.

Information about data from investigations in the warehouse area is not well documented in the references we have. Based on the JMA (1977) account, there were soil investigations performed by the US EPA during July 1974 and on behalf of the Rovic Construction Company during July 1974 and August 1975 by the United States Testing Company and during September 1974 by the New Jersey Testing Company. JMA (1977) summarizes results from the July and September 1974 investigations. We were not able to find data from the August 1975 investigation. JMA (1977) also summarizes results from samples collected by US EPA during July 1974. JMA (1977) reports sample location information (a grid on the site of the Wolf Warehouse) for the September 1974 investigation, but states that specific sample location information is not available for the July 1974 investigation.

Lipsky et al. (undated) stated that the first soil sampling by public agencies was performed in July 1974. The July 1974 data developed by United States Testing for Rovic, however, contains test results with the same values (185; 3,215; 1,775; and 195,000 mg/kg) reported by Lipsky et al. as having come from public agency sampling. It is possible that the July 1974 public agency sampling event reported by Lipsky et al. is actually the same as the Rovic Construction Company sampling event reported by JMA (1977), but without the primary data reports it is difficult to be certain. Unfortunately, the tables in the Lipsky et al. report which might contain the full data report from this investigation are missing in our copy.

The September 1974 data, which were specifically for the Wolf warehouse location ranged from 30 ppm to 142,500 ppm. The only information we have found for the US EPA testing is the reporting in JMA (1977) that the US EPA took a soil core from an unspecified location on July 11, 1974 and reported a maximum concentration of 200,000 ppm.

Assessment of these sampling events and the associated data is difficult due to various issues with the available reports. Our copy of the Lipsky et al. Report, titled "Mercury Levels in Berry's Creek" is not dated and is missing many pages. ERM (1985) gives a date of 1980 for the Lipsky et al. report and the RI/FS Work Plan gives a date of 1982. ERM (1985) reports the ranges of data cited in the NJDEP letter in the text of Section 3, but does not include the data in the full data reports presented in Section 5. We had originally assumed that ERM (1985) left this data out of the full data report because it did not pass the data reliability criteria agreed upon by ERM and the Berry's Creek Technical Advisory Group for use in the ERM (1985) report. Upon further review, however, it is not clear whether ERM (1985) explicitly screened out this data based on known data quality issues, omitted the data because they could not obtain a primary reference from which the data could be evaluated, or simply decided not to include it in the data report. ERM (1985) includes two reference that discuss data from this part of the site (Lipsky et al. and JMA, 1977), but does not include any primary reference to this data and does not include the data in their data compilation for the site. The portion of Section 3 in ERM (1985) which discusses the data cited by the NJDEP letter is an extended excerpt from the Lipsky et al. report.

NJDEP Lipsky Report (undated post 1980, possibly 1981):

Approx. 3.7 miles from Ventron/Velsicol site to the confluence of the Hackensack River

Zone of mercury contamination in surficial sediments extends some 3 miles south of the Ventron/Velsicol Site

Approx. 8,500 ppm of mercury 100 yards upstream of Ventron

Generally, mercury sediment concentrations decrease by orders of magnitudes from the Ventron/Velsicol site down to Route 3

Advisory Committe Report to Hon. Brendan Byrne (undated post 1978, possibly Jan. 26, 1979):

Between Ventron and Patterson Plank Road ~ 50 ppm to %

Eight Day Swamp ~ 50 ppm to 1000 ppm, averaging 500 ppm

Walden Marsh (now the Sports Complex) ~ 50 ppm to 100 ppm

Marsh areas south of Walden ~ 10 ppm

Little contamination appears to have reached the Hackensack River and Newark Bay. Areas close to the Hackensack River see 10 ppm in the sediments, but generally fall below 1 ppm. Water samples of the Hackensack found approx. 0.2 ppm of total mercury.

Largest amount of mercury contamination in the top 6", but can reach depths of 18"

Killifish, Blue Claw Crab, White Perch are consistently found with mercury levels above 1.0 ppm, usually closer to 2.0 ppm

The report mentions a study by the New Jersey Marine Sciences Consortium which found that mercury levels in Newark Bay were much higher in the southern end than in the northern end. Thus, indicating that Berry's Creek and the Hackensack River are not important point sources of mercury in Newark Bay.

At this time the master development plan by HMDC indicated that only the Eight Day Swamp and the Walden Swamp were expected to be saved as open space with the remainder being developed.

Jack McCormick Report (August 1977):

Sediment samples upstream of Ventron ~ 0.001 to 25.0 ppm
Sediment samples downstream of Ventron ~ 0.3 to 4,000 ppm

Surface water samples in Berry's Creek ~ 0.9 to 22.0 ppb